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Volume.8 No.3 MARCH 1984

OFFICIAL NEWSLETTER OF  
THE LONG ISLAND COMPUTER ASSOCIATION, INC.

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1984

JANUARY

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OCTOBER

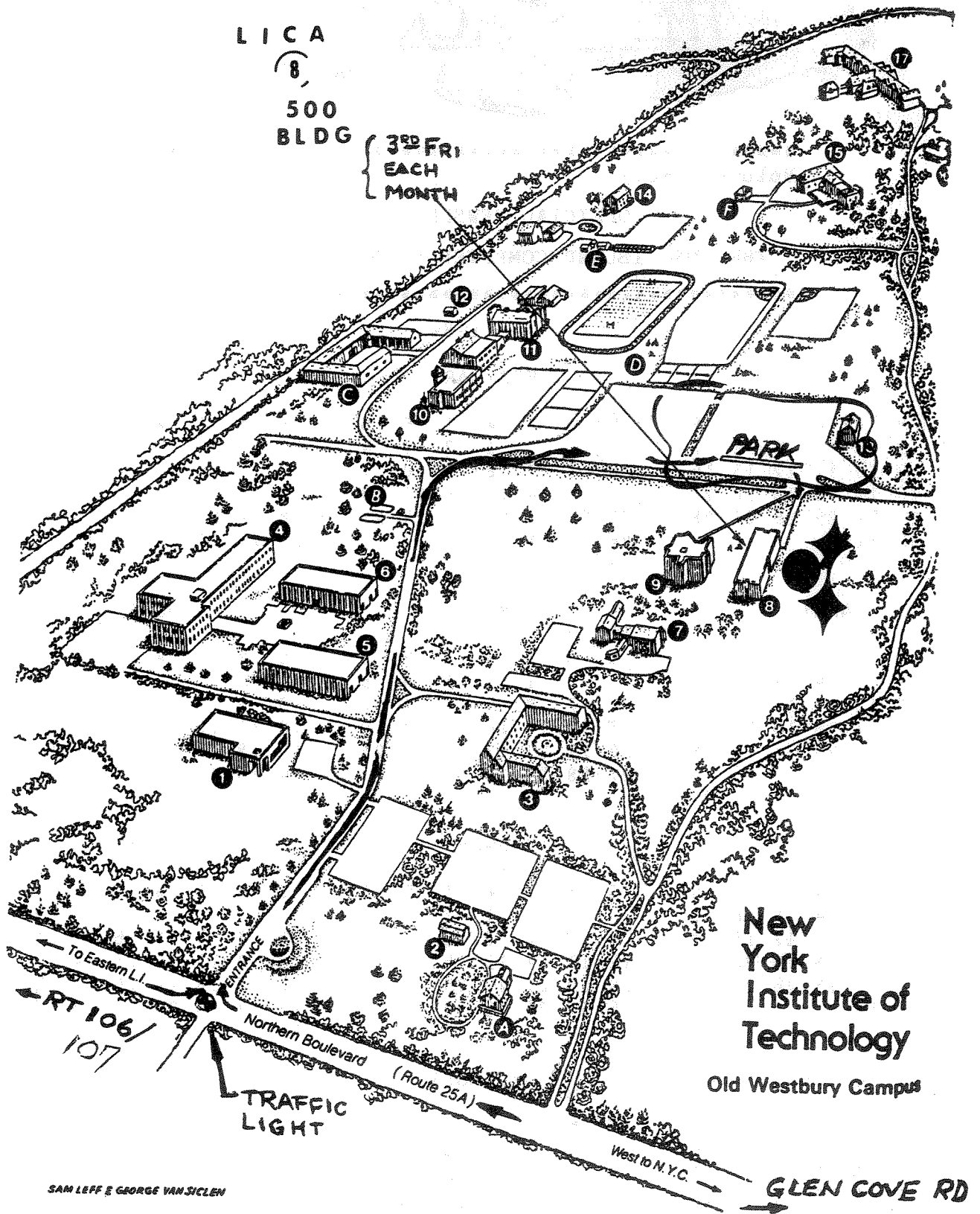
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**EDITOR'S MESSAGE**  
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Back to last months appeal. I had high hopes and thanks to some members we now have collected about \$400 towards buying an APPLE computer.

**There is a life at stake.** Not some obscure group in another part of the world, but the son of a Long Island family. I do not know these people personally. I only know that my heart goes to any family who is losing a family member. When it is their child, even more so.

The parents are literally climbing the walls. The son is despondent and about to "give up." They are not aware of my appeal.

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Family funds have been depleted on medical expenses. In desperation the mother called the University of Texas Medical Center. She had heard of a GAME called "KILLER T-CELL." (PLEASE SEE PAGE 11 of THIS ISSUE)

The doctors in Texas advised the family to contact a local computer club. I happened to be the recipient of that call. That was last November.

I have pages of documentation indicating that there is a chance for recovery by involvement with the game.

If you have not given, this page is directed at you!

Five dollars means next to nothing to most of us. If it makes a significant difference to your pocket, forget it. If you could see yourself spending the five on something frivolous, send it instead to:

**LICA/SPECIAL FUND  
BOX 71 - HICKSVILLE NY 11802**

The STACK is read by 5000 persons at least. The other guy is **NOT** gonna do it, you are. Please don't wait. We may not get another chance.

I want to make a special mention of thanks to those members who already gave.

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**ON A LIGHTER NOTE**  
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The computer fair, will most likely be held at the Electricians hall in Melville. We will be getting confirmation of the date prior to the MARCH meeting.

A few reservations have already been taken. If you are thinking of taking an indoor or outdoor booth, please contact either Michael Hofer or Al Levy. We want to give our members first crack at locations etc.

## The LICA UNIX Timesharing Computer System (for serious cyberphiles)

If you are a paid-up member of LICA, you are entitled to a free account on the LICA UNIX (XENIX) system. This is a true multiuser/multitasking system with the following features:

- Private and public mail (restricted to those with accounts)
  - Interesting news bulletins about the computer industry and hobby
  - Virtually all standard UNIX utilities and commands.
  - ex/vi editor from Berkeley.
  - C-shell from Berkeley.
  - mbasic
  - Microsoft BASIC interpreter
  - rmcobol
  - Ryan-McFarlan COBOL compiler.
  - multiplan -for spreadsheet analysis.
  - standard UNIX C compiler (As described in Kernighan and Ritchie).
  - UNIX learn package (May not be available at all times).
  - UNIX/XENIX manual
  - UNIX games (May not be available at all times).
- Supports up/downloading via the XMODEM protocols.

The latest SIG/M volumes will be on line. To apply for your account, call 516 541-7949 after 7PM on weekday evenings or during waking hours on weekends and holidays. Log into the system as newuser (Lower case preferred') and answer the questions.

### WHAT YOU NEED:

To access LICA UNIX, you need the following:

A 300 baud 103 type modem or a 1200 Baud 212 type modem.

A computer or terminal that can generate a true communications break signal

A string of modem space signals.

Although not absolutely necessary, an 80 X 24 display is highly desirable.

To fully use the power of the system, you should be able to transmit the following characters from your keyboard in addition to the usual set of upper case ascii characters: Lower Case Alphabet

Backslash	(ASCII 92)	Tilde	(ASCII 126)
Underscore	(ASCII 95)	Grave	(ASCII 96)
Delete	(ASCII 127)	Braces	(ASCII 123,125)
Brackets	(ASCII 91,93)	Vertical Bar	(ASCII 124)

### WHEN TO ACCESS LICA UNIX:

The system will be on line most evenings from 7:00 PM to 11:00 PM and during waking hours on most weekends.

### TO OPEN AN ACCOUNT ON LICA UNIX:

To establish your account, call 516 541-7949. This is a modem line. If you are using 300 baud, the system may type junk back at you after modem communications are established. If this occurs, send carriage returns or communications break signals until the message 'login:' is visible. 'newuser' (without the quotes) in response to the login prompt and end with a carriage return. You will be asked to enter some information about your terminal or system and to leave your name, phone number and your desired log-in name. You will be assigned a password by the system. You will be permitted to log in the following evening if your claim of membership can be validated.

# **The LICA UNIX Timesharing Computer System (for serious cyberphiles)**

## **RULES:**

Don't be a hog'

There is only one phone line available for access and other people may want to give it a try. Restrict your time on the system to an hour or less at a single session. Initially, we will not enforce this, but persistent violators may lose their privileges. Same for storage. Don't clutter up your home directory with stuff.

There isn't much free disk space and neither the owner nor LICA can afford additional winchesters. If we run short of room, we will try to put your personal files on floppy and mount these when you log on if you request access to these archived files.

## **WHAT LICA UNIX IS FOR:**

The LICA UNIX system is not intended for the same usage as the computer bulletin systems. Its main purpose is to give interested LICA members a chance to have some hands-on experience with the UNIX operating system - which many believe will be the standard environment for multi-user 16 and 32 bit systems of the future. The system offers the standard UNIX C compiler for those who are interested in learning that language. It also supports COBOL and BASIC. Other features include a download section (ASCII) of user contributed software and a section for news about the personal computer industry. If you want to learn about UNIX, you should be aware that it is not an easy-to-use system. it's recommended that you get one of these books:

### **'A User Guide to the UNIX System'**

by Rebecca Thomas & Jean Yates

Published by Osborne/McGraw-Hill 15.99

This is an easy to read, well illustrated text that is suitable for the person who wants to use UNIX as a base for applications. It goes into the details of the UNIX commands and file structures adequately for this purpose. No significant computer experience is assumed.

### **'Introducing the UNIX System'**

by Henry McGilton & Rachel Morgan

Published by Byte/McGraw-Hill 18.95

While still easy to read, this book goes into much greater detail about UNIX and is my personal favorite introductory book. It is aimed for a slightly more experienced computer user than is Thomas & Yates.

### **'The UNIX System' by S. R. Bourne**

Published by Addison-Wesley 20.00

This text is designed for someone with considerable computer experience who wishes to become a heavy UNIX user. It does not encompass all the material of the McGilton/Morgan book, but it goes into detail on C language programming, shell programming and text formatting using troff and nroff.

**The LICA UNIX Timesharing Computer System  
(for serious cyberphiles)**

**'UNIX Programmer's Manual' Volumes 1 and 2**

Published by Holt, Rinehart and Winston 34.00 each

These books are the BIBLE. These were written by the Bell Laboratories staff and are the definitive works on UNIX. Beware - they were written by systems programmers for systems programmers. Volume 1 contains descriptions of all of the UNIX commands and files, while Volume 2 contains tutorial papers. The books are heavy reading at a heavy price. No serious UNIX hacker can afford to be without them, though. The physical quality of these books stinks. The material seems to have been photo-typeset from old Xerox copies. The books don't cover the many useful additions to the UNIX system created at the University of California at Berkeley, many of which are available on the LICA UNIX system.

For the CP/M fans, we have a UNIX adaptation of XMODEM on line. We offer the latest volumes of SIG/M releases here. If you are a CP/M user that is only interested in this aspect of the system, we have tried to make the system seem CP/M-like. If you type a CP/M command, it may work. If not, the system may type out an explanation of the syntax of the corresponding UNIX command. The XMODEM adaptation is used in the same way as the RCPM version, thanks to a simple front end shell procedure that converts the invocation command string into the format that the real program wants. If you want to bypass this front end, type 'umodem' and the umodem program will give its own syntax summary. To see if there are any SIG/M offerings available, type 'sigm' and follow the directions.

.....submitted by Stan Misel

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**Editor's Comments**  
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In response to the dozens of letters, phone calls and requests that I have been receiving I asked Stan to redo this article. It is apparent that he complied with this request. Thanks Stan.

I will continue with articles on the CBBS next issue. For those people who have asked for BACK-ISSUES of the STACK, sorry. I do not keep any of the back issues. All copies of the STACK are distributed each month. We do have copies on NorthStar 5 inch SSSD CP/M disks and 8 inch SSSD standard CP/M disks.

The articles on the CBBS bulletin board system will be available soon as a booklet. The print will be in full size. Copies of this booklet will be available at a moderate cost and of course LICA members get a discount.

Al Levy

# Systematic Computer Services, Inc.

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CENTRAL ISLIP, NEW YORK 11722

516 - 234-9700

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3 User System including 192KB RAM 2MB Floppy with Dual Floppy Disk Drives and a Z80A Microprocessor With MP/M II Operating System Included		
Altos 5-5D Computer.....(Demo Unit).....	\$ 5,490	\$ 3,990
3 User Sys including 192KB RAM 1MB Floppy 12 MB Winchester Hard Disk Z80A Microprocessor With MP/M II Operating System Included		
Altos 586 -10 Computer.....(Demo Unit).....	\$ 7,990	\$ 5,495
5 User System including 192KB RAM 1MB Floppy 12 MB Winchester Hard Disk with 8086 Microprocessor With Xenix Run Time System Included		

### PRINTERS:

C. Itoh F10-40 Letter Quality 40CPS Par. (New)....	\$ 1,895	\$ 1,175
C. Itoh F10-40 Letter Quality 40CPS Par. (Demo)...	\$ 1,895	\$ 1,065
C. Itoh F10-40 Letter Quality 40CPS Ser. (Demo)...	\$ 1,895	\$ 1,065
C. Itoh Starwriter Letter Quality 45CPS Par (Demo)	\$ 2,200	\$ 1,195
C. Itoh 8510 80 Column 120 CPS Par/Ser (New).....	\$ 745	\$ 560
C. Itoh 1550 132 Column 120 CPS Par. (New).....	\$ 995	\$ 639
C. Itoh 1550 132 Column Par/Ser Printer (New)....	\$ 1,095	\$ 675
Anacom 150 150 CPS 136 Column Parallel.(Demo)...	\$ 1,250	\$ 600
Anadex Model DP9501 200 CPS 136 Column Par/Ser-Demo	1,725	\$ 895
Xerox Diablo 630 with Tractor Ser Interface Printer	2,500	\$ 1,800
Okidata Microline 92 160 CPS 80 Column - Ser (Demo)	698	\$ 545

### DISKETTES IN PLASTIC BOXES: (Box of 10 Diskettes)

Dysan 8" SS DD Diskettes.....(ID # 3740/1D \$	62	\$ 39
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### RIBBONS:

Diablo Hytype 2 M/S Ribbons.....	\$ 8	\$ 5
MX 100 Ribbons.....	\$ 17	\$ 7
Comment II Ribbons	\$ 4	\$ 1
Prowriter, Nec 8023, Apple Dot Matrix \$	13	\$ 6

\* Minimum Order For Ribbons: One Doz.

### COMPUTER, TERMINAL, AND PRINTER COVERS

Altos Series 5 Computer.....	\$ 22	\$ 9
Wyse 100 Smart Terminal.....	\$ 22	\$ 9
C. Itoh F10-40 Printer.....	\$ 22	\$ 9
C. Itoh Prowriter Printer.....	\$ 22	\$ 9

Additional Costs: Shipping and Handling Charges & N.Y. Sales Tax

C.O.D. only accept for established accounts with SCSI

ALL ITEMS ARE IN LIMITED SUPPLY AND WILL BE OFFERED AS LONG AS SUPPLY LAST

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**THE PERPETUAL CALENDAR PROGRAM**  
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When I first joined LICA I was anxious to learn programming. By associating with the marvelous people in this organization, I learned. One way of learning is by imitation.

It is always my intention to include in the STACK, at least one BASIC program, simple or complex, plus an assembly language program, and at least one listing in another language. Unfortunately, this is not accomplished.

I know that many of the newer members look forward to seeing and copying programs so that they may learn. This page is for them.

A1

Written for PolyMorphic BASIC version C04 which is very much like North Star BASIC. Below is the original listing (without REMS) and a second listing, broken down into single line commands REMarked with the Microsoft equivalents. For equivalent commands on other machines see:

**THE BASIC HANDBOOK**

Author, David A Lien

Published by Compusoft, Inc

```

10 DIM M(72,7),D(12),Z$(1:21),P$(1:1),L$(1:1)\FILE:2,LIST
20 MAT M=0\MAT READ D\H=2\L$=CHR$(13)\P$=CHR$(12)
30 DATA31,28,31,30,31,30,31,31,30,31,30,31
40 DATA" January"," February"," March "," April "
50 DATA" May "," June "," July "," August "
60 DATA"September"," October "," November"," December"
70 PRINTP$,L$,"You will need a printer to use this program."
80 PRINTL$,"This program will print a calendar for any year"
90 INPUT"after 1582. What year would you like? ",Y\Y=INT(Y)
100 IF Y<1583 THEN PRINT"You didn't read the instructions."\GOTO80
110 L=(Y/4=INT(Y/4)ANDY/100<>INT(Y/100))ORY/400=INT(Y/400)
120 D(2)=D(2)+L\J=Y+INT((Y-1)/4)-INT((Y-1)/100)+INT((Y-1)/400)
130 J=J-INT(J/7)*7+1\FORM0=1TO12\K=6*MO-5\FORD0=1TOD(MO)
140 M(K,J)=D0\J=J+1\IFJ>7THENJ=1\K=K+1
150 NEXT\NEXT\PRINT:H,L$,L$,L$,L$,L$,L$,L$,TAB(35),Y,L$
160 Z$=" S M T W T F S"\FORS=1TO55STEP18\READA$,B$,C$
170 PRINT:H," ",A$," ",B$,
180 PRINT:H," ",C$,L$,L$,Z$," ",Z$," ",Z$
190 FOR T=S TO S+5\FOR U=0 TO 2\FOR J=1 TO 7\K=T+6*U
200 IF M(K,J)<>0 THEN PRINT:H,%3I,M(K,J),ELSE PRINT:H," ",
210 NEXT\PRINT:H," ",\NEXT\PRINT:H," "\NEXT
220 PRINT:H," "\NEXT\PRINT:H,P$\PRINTP$,CALL(0)
  
```



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**THE PERPETUAL CALENDAR PROGRAM**  
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```

REM Backslashes are used for multiple commands
REM Most BASICS use colons for multiple commands
REM M=The possible weekly combinations
REM such as 1 2 3 4 5 6 7 or [ ] 2 3 4 5 6 etc.
10 DIM M(72,7)
REM D=Total Number of Days in each month, See Line 540
11 DIM D(12)
REM PolyMorphic defaults $strings to 10 characetrns unless DIMensioned.
REM This string is dimensioned once, and has a maximum size of 21 characters
12 DIM Z$(1:21)
REM Not really needed but it does save memory, 1 time - 1 character
13 DIM P$(1:1)
14 DIM L$(1:1)
REM Allow whichever device has been selected to accept
REM characters for printing. (open a channel) Similar to LPRINT in Microsoft
BASIC
50 FILE:2,LIST
REM All number in the MATRIX (M) = 0
REM If your machine does not have MAT statements, try this FOR/NEXT loop
REM FOR I=1 TO 504:M(I)=0:NEXT:REM (72 x 7 matrix)
60 MAT M=0
REM Read DATA on LINE 540
90 MAT READ D
REM H=File Channel used for printer
110 H=2
REM L$= A Carraige Return. If you want to add a linefeed
REM make L$=CHR$(13)+CHR$(10)
130 L$=CHR$(13)
REM P$= Form Feed or Clear Screen
150 P$=CHR$(12)
160 PRINT P$,L$,"You will need a printer to use this program."
170 PRINT L$,"This program will print a calendar for any year"
180 INPUT"after 1582. What year would you like? ",Y
REM Make sure that the user typed an integer, if not, correct it
190 Y=INT(Y)
REM Make sure that the year typed is within the limitations
200 IF Y<1583 THEN PRINT "Read the instructions"\GOTO 170
REM I'm not touching this one without giving a 3 hr class
REM See footnote for AND OR instructions
210 L=(Y/4=INT(Y/4) AND Y/100<>INT(Y/100)) OR Y /400=INT(Y/400)
220 D(2)=D(2)+L\J=Y+INT((Y-1)/4)-INT((Y-1)/100)+INT((Y-1)/400)
240 J=J-INT(J/7)*7+1

```

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# THE PERPETUAL CALENDAR PROGRAM

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REM Let's do this 12 times (once for each month)
250 FOR M0=1 TO 12
260 K=6*M0-5
    REM Date for this month start at 1 and ends (see line 540)
280 FOR D0=1 TO D(M0)
285 M(K,J)=D0
300 J=J+1
310 IF J>7 THEN J=1
311 K=K+1
320 NEXT D0
330 NEXT M0
    REM Translation LPRINT H;L$;L$;L$;L$;L$;L$;L$;TAB(35);Y;L$
340 PRINT:H,L$,L$,L$,L$,L$,L$,L$,TAB(35),Y,L$
    REM I think you can figure this one out
350 Z$=" S M T W T F S"
360 FOR S=1 TO 55 STEP 18
    REM Get three month names
370 READ A$,B$,C$
380 PRINT:H,"      ",A$,"      ",B$,
    REM Commas keep the PRINT on the same line (no tab)
    REM similar to semi-colons on most machines
    REM Keep in mind that L$= carriage return
    REM The Poly includes a Linefeed with the return
    REM On some machine you will have to add CHR$(10)
390 PRINT:H,"      ",C$,L$,L$,Z$,"      ",Z$,"      ",Z$
400 FOR T=S TO S+5
410 FOR U=0 TO 2
420         FOR J=1 TO 7
430 K=T+6*U
440 IF M(K,J)<>0 THEN PRINT:H,%3I,M(K,J),ELSE PRINT:H,"      ",
450 NEXT J
460 PRINT:H,"      ",
470 NEXT U
480 PRINT:H," "
490 NEXT T
500 PRINT:H," "
510 NEXT S
520 PRINT:H,P$
530 PRINT P$
    REM SYSTEM = RETURN TO CP/M or Operating System = STOP
531 SYSTEM
540 DATA 31,28,31,30,31,30,31,31,30,31,30,31
550 DATA" January"," February"," March "," April "
560 DATA" May "," June "," July "," August "
570 DATA"September"," October "," November"," December"

```

\*\*\*\*\*  
**THE PERPETUAL CALENDAR PROGRAM**  
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**AND - OR MATH**

"AND" means if both of the numbers =1, the answer is 1

Imagine a number that looks like this (1)

Imagine a number that looks like this (1)

Top is "1", bottom is "1" answer is 1

If both are 1, the answer is 1

Imagine a number that looks like this (1)

Imagine a number that looks like this (0)

Top is "1", bottom is "0" answer is 0

If both are not 1, the answer is 0

1 AND 1=1

1 AND 0=0

0 AND 1=0

0 AND 0 =0

"OR" means if either of the numbers =1, the answer is 1  
 therefore:

Imagine a number that looks like this (1)

Imagine a number that looks like this (0)

Top is "1", bottom is "0" answer is 1

If either =1, the answer is 1

1 OR 1=1

1 OR 0=1

0 OR 1=1

0 OR 0 =0

The numbers in the program are expressed in decimal. To see the equations clearly, the numbers must be converted to binary. Here is short example:

Decimal (57 AND 12)=8

0011 1001

0000 1100

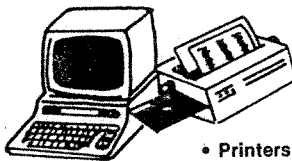
=====

0000 1000

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**MINUTES OF THE JANUARY LICA MEETING**  
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Michael Hofer stated that from time to time the President will be publishing "Policy papers" which will be subordinate to the Constitution and By laws. These papers will be subject to constant review and revision. The main purpose of these papers is to get things down on paper and tell who does what for the organization.

"Policy of LICA it self is constitutionally formulated by the President, with the advise of the executive board, and by the **corresponding secretary**. " Anything stated by any other member does not constitute policy or statement from the organization.

If you in any way make a statement for LICA please then refer them to the Al Stone, **the corresponding secretary**.

LICA will authorize a Special Interest Group (SIG) for any group of people with a common interest who want to explore it under the umbrella of LICA. At the present time we have 7 SIGs.

Stan Misel gave a Treasurers report

Aileen Harrison was presented with a certificate thanking her for her years of dedicated service as Treasurer of LICA.

Peripheral Visions has sent LICA a request for reviewers of software. This company will pay people consulting fees for these reviews. Get in touch with an Executive board member for more information.

The 1984 Trenton computer fair will be on April 14, and 15

Southern Bell has dropped it's higher price for modem users

Pat Lavelle and Howard Morgasen gave a talk about Digital Equipment Corporation's Rainbow 100+.

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**Minutes of the February LICA meeting**  
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The April General meeting will be held on April 27, 1984 which is the forth Friday in april. This change has been made because the third Friday is Good Friday.

The sub-groups gave reports

This years computer fair will be the first Saturday in June. It will be held in the Electricians Hall on route 110. Details will follow.

Donations were collected to obtain an Apple computer for a boy who has Cancer. For details see Page 11 of The February Stack.

Dick Smith gave a presentation about Resources Unlimited. Resources Unlimited is a market research firm who will pay you to come in and participate in an interview.

At the March meeting, Peripheral Visions will be giving a lecture on bringing a piece of software to market. Also There will be a Halon fire extinguisher and a demonstration of the Dimension 68000. The was a brief question and answer session.

A lecture was given by Mary Planding and Christopher Ihm of Future Visions Computer Store about the Apple Macintosh and the Lisa.

Submitted by Joshua L. Weinberg

## THE ORIGINS OF KILLER T-CELL

The game Killer T-Cell is based on several exciting discoveries in biomedical research. Certain white blood cells, the lymphocytes, protect the human body against invading bacteria and viruses. As scientists studied these defending cells of the immune system in detail, they found two major kinds of lymphocytes. The B-lymphocytes generate specific antibodies that are released into the blood to combine with and disable the invading bacteria or viruses. In contrast, the T-lymphocytes seek out the invaders and directly engulf and destroy them. T-lymphocytes are produced by the thymus (hence the "T" prefix), a gland just under the breastbone.

When scientists realized that T-lymphocytes often could recognize cancer cells as harmful invaders, stimulation of the immune system became a major part of cancer therapy. Indeed, in a healthy person these lymphocytes, or T-cells, may wipe out most abnormal cells as soon as they arise, and thus they keep cancer from ever getting started. From this viewpoint, we can readily see why cancer is more prevalent in older people, since the immune system often weakens with age.

Killer T-Cell was designed around this scenario. As in real life, the cancer cells divide exponentially and invade the normal tissue. The T-cell has to track down and destroy them, with your help, of course. If things get out of hand, chemotherapy can be used to destroy most of the cancer cells. Chemotherapy costs the patient, since these agents are rather toxic chemicals, and it costs you points in the game.

Some aspects of the game are artificial. Of course, your body has millions of T-lymphocytes, not just one. T-cells don't have to destroy normal cells to break out of the maze, and we don't know that killer tumor cells can zap the T-cell. These elements were added to make the game more exciting.

However, there is a serious message in this game. Once you have played Killer T-Cell, you begin to understand that you are not defenseless against this disease called cancer. Not only in this game, but in real life, cancer can be beaten.

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\*\*\*\*\*  
**MONTHLY MEETINGS**  
 \*\*\*\*\*

All meetings, except the Suffolk meeting of the IBM PC/UG and 6800/UG are held at the New York Institute of Technology, Old Westbury Campus. **The Long Island Computer Association, INC.** is open to everyone, amateur or professional with an interest in computers, computer applications, programming, or related subjects. Dues are \$12.00 per year which includes monthly issues of this publication.

**LICA** meets each month on the third Friday evening at 8:00 in Room 508, Building 500.

\*\*\*\*\*  
**Long Island Computer Association, Inc. Special Interest Groups**  
 \*\*\*\*\*

SUB-GROUP	CHAIRMEN	PHONE(516)	Meetings Each Month
6502	George Carlsen		3rd Friday 7:00
680X	Roger Kaucher	796-8746	
ATARI	Michael Grussell	794-4895	
COMMODORE	Judie Schwartz	799-4792	3rd Friday 7:00
FRAN/APPLE	Susan Heimlich	759-9716	3rd Friday 7:00
IBM - Suffolk	Marvin Freifeld	724-0574	2nd Friday 8:00
IBM - Nassau		724-0574	1st Friday 8:00
KAYPRO	Richard Weingarten	627-9276	
NEC	Jerry Worthing	735-2592	
PolyMorphic	Al Levy	293-8368	3rd Friday 7:00
S/100 CP/M	Bob Sewall	541-4837	2nd Friday 8:00
TRS-80	Ed Zuilkowski	938-3320	2nd Friday 7:00

\*\*\*\*\*  
**COMMERCIAL ADVERTISING POLICY**  
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In an effort to cover our costs of duplication and mailing, and to provide a more extensive monthly edition of **THE STACK**, commercial display ads are accepted in 1/4 1/2 and Full Page sizes. Minimum participation is for three months. The monthly rates are \$150, \$175, and \$225 respectively. Copy need not be the same each month. Camera ready preferred. Type setting & layout work available at additional charge.

**All checks should be made payable to LICA**

The **STACK** is mailed to other computer clubs on an exchange basis as well as to various technical publishers. Permission for reprinting or quoting items in **The STACK** is granted providing that credit is given & a copy of the reprint is sent to **The STACK**. Member articles and other data affecting **The STACK** must be received by the 1st of any month, to be published in the following issue. All copy should be sent to:

Al Levy  
 P.O.Box 71  
 Hicksville NY 11802  
 (516) 293-8368

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=====  
**F R A N - A P P L E / U s e r ' s G r o u p**  
=====

This group meets regularly from 7 P.M.- 8 P.M. at the New York Institute of Technology. Meetings are on the same night as the general meeting. Twenty members attended.

In contrast with last month, when we saw a ProDos demonstration, this month we had a question and answer session covering such diverse topics as modems, adventure programs, languages and copy programs.

There was also a roundtable discussion of how each member put his or her machine to work. Next month we anticipate a demonstration and guided discussion of several useful programs.

Submitted by Susan Heimlich, Chairperson

\*\*\*\*\*  
**REPORT FROM S/100**  
\*\*\*\*\*

We were looking forward to a talk from NorthStar computer systems. Because of a last minute problem the talk was cancelled and we had a round table discussion on how we might improve or upgrade a hypothetical system. The suggestions were interesting to say the least. A point was made that hardware configuration could be left as/is and the best possible upgrade, if one was to be made, would be in changing the operating system.

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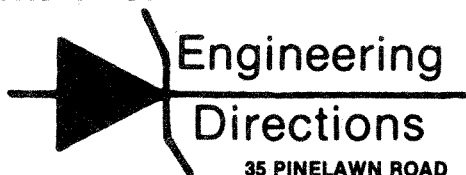
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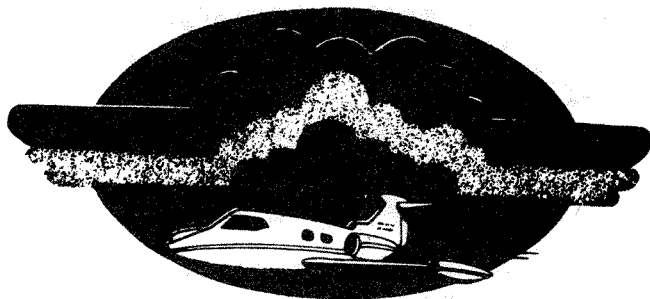
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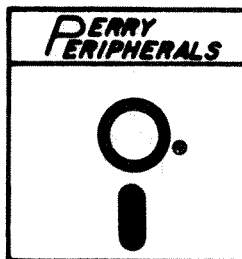
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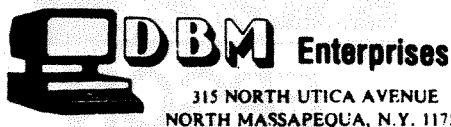
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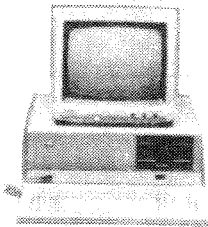
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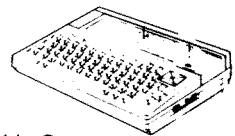
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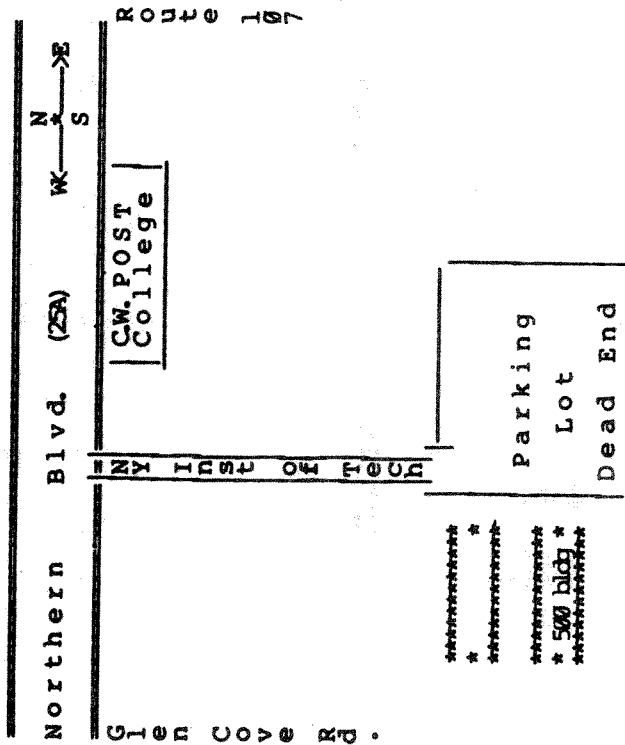
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